

**WHAT IS CLAIMED IS:**

1. In combination for use in a rotatable hair brush,

a pair of oppositely disposed supports,

a plurality of dividers supported by at least one of the oppositely disposed

5 supports, the dividers being spaced from one another in an annular configuration to define a central opening,

a core disposed in the central opening and supported at its opposite ends by the supports,

10 there being a plurality of series of openings in the core, the openings in each series being spaced annularly from the openings in the other series,

bristles disposed in the openings in the core and having characteristics to brush the user's hair during the rotation of the core, and

a motor operatively coupled to the core to rotate the core.

2. In a combination as set forth in claim 1 wherein

the motor rotates the core and the dividers and wherein

the dividers abut the core at spaced portions in the annular configurations on the core.

3. In a combination as set forth in claim 1 wherein

the brush has a handle and wherein the handle is smoothly cratered at the end of the handle adjacent to the core to provide for a brushing of the hair, during the rotation of the core, without entangling the hair.

4. In a combination as set forth in claim 1 wherein

a first switch is disposed in the handle and is provided with three (3) different positions and wherein

the switch is operative in the first position to prevent the core from rotating and is operative in the second position to provide for a rotation of the core at a first speed and is operative in the third position to provide for a rotation of the core at a second speed different from the first speed.

5. In a combination as set forth in claim 1 wherein

a switch is disposed in the handle and is provided with a first position to obtain a rotation of the core in a first direction and is provided with a second position to obtain a rotation of the core in a second direction different from the first direction.

6. In a combination as set forth in claim 1 wherein

the brush has a handle and wherein the handle is smoothly cratered at the end of the handle adjacent to the core to provide for a brushing of the hair, without entangling the hair, during the rotation of the core and wherein

5 a first switch is disposed in the handle and is operative in three (3) positions and wherein

the switch is operative in the first position to prevent the core from rotating and is operative in the second position to provide for a rotation of the core at a first speed and is operative in the third position to provide for a rotation of the core at a second speed different from the first speed and wherein

10 a second switch is disposed in the handle and is provided with a first position to obtain a rotation of the core in a first direction and is provided with a second position to obtain a rotation of the core in a second direction different from the first direction.

7. In a combination for use in a rotatable hair brush,

a rotatable core, there being holes disposed at spaced positions in the core, bristles disposed in the holes in the core to brush the user's hair upon a rotation of the core,

5 a detent at one of the ends of the core,

a support,

a plurality of dividers extending from the support in a co-operative relationship with the core at displaced positions around the peripheral surface of the core,

the support having a detent in a mating relationship with the core detent to retain

10 the dividers and the core in a fixed relationship.

8. In a combination as set forth in claim 7,

the mating relationship between the support and the rotatable core providing for the rotation of the dividers with the rotatable core.

9. In a combination as set forth in claim 7 wherein

the hair brush includes a handle and wherein

the hair brush is shaped relative to the handle at the end adjacent to the handle to prevent the user's hair from being entangled in the handle as the core and the dividers rotate.

10. In a combination as set forth in claim 7 wherein

the bristles have a distal end and wherein

the dividers extend in a direction toward the distal end of the bristles and have a curved surface at the distal end wherein

5 the dividers extend through an axial distance corresponding to the length of the core.

11. In a combination as set forth in claim 10 wherein  
the core is substantially cylindrical and wherein  
the dividers are substantially cylindrical and wherein  
the dividers have axes and wherein  
the core has an axis and wherein  
the axes of the core and the dividers are substantially parallel.

12. In combination as set forth in claim 8 wherein  
the hair brush includes a handle and wherein  
the hair brush is shaped relative to the handle at the end adjacent to the handle to  
prevent the user's hair from being entangled in the handle as the core and the dividers rotate and  
wherein

the bristles have a distal end and wherein

the dividers extend in a direction toward the distal end of the bristles and have a  
curved surface at the distal end and wherein

the dividers extend through a distance corresponding to the length of the core and

wherein

the core is substantially cylindrical and wherein

the dividers are substantially cylindrical and wherein

the dividers have axes and wherein

the core has an axis and wherein

the axes of the core and the dividers are substantially parallel.

13. In combination for use in a rotatable hair brush,

a plurality of dividers extending in a first direction and spaced from one another in an annular direction to define a central opening extending in the first direction,

supports disposed at the opposite ends of the dividers for holding the dividers in a fixed relationship defining the central opening,

a core fixedly positioned in the central opening by the supports,

there being series of openings in the core, the openings in each series being spaced in the annular direction from the openings in the other series,

bristles disposed in the openings in the core for brushing the user's hair when the brush rotates,

the dividers being positioned relative to the core and the bristles for pushing the hair outwardly in a direction away from the central opening as the core and the dividers rotate, thereby preventing the hair brush from entangling the user's hair.

14. In a combination as set forth in claim 13,

a handle included in the hair brush and shaped at the end adjacent to the core and to the dividers for directing the user's hair away from the core to prevent the user's hair from being entangled by the brush during the rotation of the brush.

15. In a combination as set forth in claim 13 including,

a handle included in the brush at one end of the brush, and

the support at the end of the brush displaced from the handle constituting an end cap having a peripheral configuration to prevent the user's hair from becoming entangled in the brush during the rotation of the brush.

16. In a combination as set forth in claim 14 wherein

a battery is disposed in the handle and wherein

a motor is disposed in the handle and is electrically coupled to the battery to rotate the core and the dividers.

17. In a combination as set forth in claim 15 wherein

the end cap overlaps the dividers to provide a smooth surface around its periphery for preventing the user's hair from becoming entangled as the core and the dividers rotate.

18. In a combination as set forth in claim 17 wherein  
the peripheral configuration of the end cap is provided with a smooth concave  
configuration in the annular direction between each adjacent pair of dividers to prevent the user's  
hair from becoming entangled as the hair brush rotates.

19. In a combination as set forth in claim 18 wherein  
a handle is included in the hair brush and is shaped at the end adjacent to the core  
and to the dividers for directing the user's hair away from the core and the dividers to prevent the  
user's hair from being entangled by the brush during the rotation of the brush and wherein  
a battery is disposed in the handle and wherein  
a motor is disposed in the handle and is electrically coupled to the battery to rotate  
the core and the dividers.

20. In a combination as set forth in claim 19 wherein  
the handle is provided with a periphery and wherein  
a first switch is disposed on the handle periphery and is operative in a first  
relationship to provide for the operation of the motor at a first speed and is operative in a second  
relationship to provide for the operation of the motor at a second speed different from the first  
speed and wherein



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a second switch is disposed on the handle periphery and is operative in a first relationship to provide for an operation of the motor in a first direction and is operative in a second relationship to provide for an operation of the motor in a second direction opposite to the first direction.

21. In a combination for use in a rotatable hair brush,

a core having a periphery,

there being pluralities of holes in the core, each of the plurality of holes being at a spaced position around the core periphery relative to the positions of the other pluralities of the holes,

bristles in the holes in each of the of the pluralities,

a plurality of dividers disposed at spaced positions around the core periphery at positions extending radially outwardly from the core, each of the dividers being disposed between an adjacent pair of pluralities of bristles in the core,

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the core and the dividers being disposed in a fixed relationship to one another at opposite ends of the core and the dividers,

a handle at one of the opposite ends of the core and the dividers, and

an end cap disposed at the other of the opposite ends of the core and the dividers, the end cap being provided with a peripheral configuration to prevent the user's hair from being entangled in the rotatable hair brush as the hair brush rotates.

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22. In a combination as set forth in claim 21 wherein

the end cap disposed on the core and the dividers is provided with a concave configuration between each adjacent pair of the dividers to prevent the user's hair from being entangled during the rotation of the hair brush.

23. In a combination as set forth in claim 22 wherein

the concave configuration of the end cap extends between each pair of the dividers and wherein

the peripheral configuration of the end cap at each of the dividers corresponds to the peripheral configuration of the dividers and provide a smooth continuity with the concave configuration of the end cap at the positions between adjacent pairs of the dividers.

24. In a combination as set forth in claim 21 wherein

an end cap is provided adjacent the handle and wherein

the handle and the end cap adjacent the handle are provided with a smooth composite configuration to prevent the user's hair from being entangled when the hair brush is rotating.

25. In a combination as set forth in claim 24 wherein  
the handle and the end cap adjacent the handle are provided with a smooth  
concave composite configuration to prevent the user's hair from being entangled when the hair  
brush is rotating.

26. In a combination as set forth in claim 25 wherein  
the concave configuration of the end cap extends between each pair of the dividers  
and wherein  
the peripheral configuration of each of the dividers corresponds to the  
configuration of the dividers and wherein  
an end cap is provided adjacent the handle and wherein  
the handle and the end cap adjacent the handle are provided with a smooth  
composite configuration to prevent the user's hair from being entangled when the hair brush is  
rotating.

27. In a combination for use in a rotatable hair brush,  
a core having a periphery,  
there being pluralities of holes in the core, each of the pluralities of holes being at  
a spaced position around the core periphery relative to the other pluralities of the holes,  
bristles in the holes in each of the pluralities,

a plurality of dividers disposed at spaced positions around the core periphery at positions extending outwardly from the core, each of the dividers being disposed between adjacent pairs of pluralities of bristles in the core,

the core and the dividers being disposed in a fixed relationship to another at  
10 oppose ends of the core and the dividers,

a handle at one of the opposite ends of the core and the dividers, and

an end cap adjacent the handle,

the handle and the end cap adjacent the handle being provided with a smooth composite configuration to prevent the user's hair from being entangled when the hair brush  
15 rotates.

20 28. In a combination as set forth in claim 27 wherein

the handle and the adjacent end cap are provided with a smooth concave composite configuration to prevent the user's hair from being entangled when the hair brush is rotating.

29. In a combination as set forth in claim 28 wherein

the smooth concave composite configuration of the handle and the adjacent end cap is seamless.

30. In a combination as set forth in claim 28 wherein

an end cap is disposed at the opposite end of the core and the dividers from the handle and is provided with a peripheral configuration to prevent the user's hair from being entangled in the rotatable hair brush as the brush rotates.

31. In a combination as set forth in claim 30 wherein

the end cap at the opposite end of the core is provided with a smooth concave configuration to prevent the user's hair from being entangled as the hair brush rotates.

32. In a combination as set forth in claim 31 wherein

the end cap at the opposite end of the core has portions extending over the dividers in a smooth configuration and with the smooth concave configuration of the end cap continuous with the portions of the end cap extending over the dividers.

33. A method of brushing a user's hair, including the steps of:

providing supports for a plurality of dividers spaced from one another in an annular configuration to define a central opening, the supports being provided at the opposite ends of the dividers,

5 providing a core having a plurality of series of openings, each of the plurality of series of openings being spaced in an annular direction from the other ones of the plurality of series of openings,

disposing the core in the central opening defined by the dividers, and

providing for the supports to retain the core in a fixed position in the central

10 opening defined by the dividers.

34. In a method as set forth in claim 33, including the steps of:

providing a handle at one end of the core and the dividers, and

providing an end cap at the opposite end of the core and the dividers with a peripheral configuration to prevent the user's hair from being entangled when the hair brush is rotated.

35. A method as set forth in claim 33, including the steps of:

providing the handle with a peripheral configuration at one end to prevent the user's hair from being entangled when the handle is attached to the hair brush and the hair brush is rotated, and

5 attaching the handle to the support.

36. A method as set forth in claim 35 wherein

the peripheral configuration of the handle at the one end is smooth and concave to prevent the user's hair from becoming entangled when the hair brush is rotated.

37. A method of brushing a user's hair, including the steps of:

providing a core having a plurality of series of bristles, each series being displaced annularly from the adjacent series around the periphery of the core,

providing in the hair brush a plurality of dividers each disposed outwardly from the periphery of the core between an adjacent pair of series of bristles,

supporting the core and the dividers in a fixed relationship to each other, and

providing for the rotatable hair brush a handle which provides a smooth continuous surface with the rotatable portion of the brush to prevent the user's hair from being entangled in the brush during the operation of the brush.

38. A method as set forth in claim 37 wherein

the smooth continuous configuration between the handle and the rotatable portion of the brush is substantially seamless.

39. A method as set forth in claim 37 wherein  
the smooth continuous configuration between the handle and the rotatable portion of the  
brush is concave.

40. A method as set forth in claim 37 wherein  
an end cap is disposed on the brush at the peripheral end of the brush and is  
provided with a smooth continuous outer configuration to prevent the user's hair from becoming  
entangled during the brush operation.

41. A method as set forth in claim 40 wherein  
the end cap covers the core and the dividers at the outer ends of the core and the  
dividers and wherein the end cap is substantially seamless relative to the core and the dividers.

42. A method as set forth in claim 41 wherein  
the dividers have a smooth continuous peripheral configuration and wherein the  
end cap has a periphery following the peripheral contour of the dividers and has a smooth  
continuous concave configuration between the end caps.

43. A method of brushing a user's hair, including the steps of:  
providing a rotatable hair brush,



providing in the brush a plurality or series of bristles, each series being displaced annularly from the adjacent series around the periphery of the core,

5 providing in the hair brush a plurality of dividers each disposed outwardly from the core between an adjacent pair of series of bristles,

providing a handle for the rotatable hair brush, and

providing supports for the core and the dividers at the opposite ends of the core and the dividers.

44. A method as set forth in claim 43, including the step of:

disposing an end cap on the brush at the outer end of the brush with a smooth continuous peripheral configuration to prevent the user's hair from being entangled in the brush during the operation of the brush.

45. A method as set forth in claim 44 wherein

the periphery of the end cap extends around the dividers in a configuration corresponding to the configuration of the dividers and extends between the dividers in a configuration continuous with the extension of the periphery of the end cap around the dividers.

46. A method as set forth in claim 43 wherein

the position of the handle adjacent to the core and the dividers is provided with a concave configuration to prevent the hair strands from becoming entangled in the brush as the brush rotates.